

JPRS: 18,411

OTS: 63-21444

28 March 1963

405-237

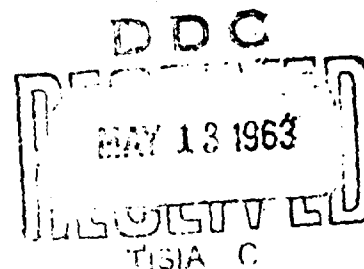
AD No.

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USSR Industrial Development

SOVIET CHEMICAL INDUSTRY

No. 58



U. S. DEPARTMENT OF COMMERCE  
OFFICE OF TECHNICAL SERVICES  
JOINT PUBLICATIONS RESEARCH SERVICE  
Building T-30  
Ohio Dr. and Independence Ave., S.W.  
Washington 25, D. C.

Price: \$1.00

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USSR Industrial Development

## SOVIET CHEMICAL INDUSTRY

No 58

This serial publication contains translations of selected articles on chemical industry in the Soviet Union, on the specific subjects indicated in the table of contents. Complete bibliographic information accompanies each article.

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## **PRODUCE MORE SUPERPHOSPHATE AT THE NEVA CHEMICAL PLANT**

[Following is a translation of an article by F. Kirillov et al. in the Russian-language newspaper Leninskaya Pravda, Leningrad, 4 Dec 62.]

Fluffy flakes of snow blanket the territory of the Neva Chemical Plant. Its giant buildings and towers bestride the right bank of the Neva. This is the kingdom of chemistry, which provides the national economy with sulfuric acid and valuable chemical fertilizers. The use of these products in our industry and agriculture tremendously influences the intensification of production processes and the fertility of soils.

We walk on the snow carpet to the crossroads where the roads branch off toward the two principal shops of the enterprise -- superphosphate and sulfuric acid. We halt and ponder which road to take. After all, the question to which we seek an answer pertains equally to the collectives of both shops. Briefly the question is why does not the plant fulfill its socialist pledges as regards the output of superphosphate?

Last spring, on discussing the results of the March Plenum of the CC CPSU, the chemists pledged themselves to provide agriculture with additional thousands of tons of mineral fertilizers. Actually, however, they dispatched 2,000 tons less.

...The superphosphate shop, which is not infrequently nicknamed the factory of fertility, has a vacant air. The equipment stands silently. Such a calm at the very peak of the work day seems strange to us.

The attendant A. Morozov tells us: "Nothing strange about it. There are no materials. That's why we're idle. Had we the raw materials, we could have made our pledge good twice over. But now we are racking our brains over how to fulfill the plan. We have been told that at present there is no plan for raw materials. It is as if we were in the sea and yet lacked water, for we are making our own raw material -- sulfuric acid -- at the neighboring shop."

The workers at the fertility factory told us mortified by how the competition for increasing the production of mineral fertilizers is dying down, how the economic indexes of performance of the shop are deteriorating. It could have been otherwise. They cited as an example the personnel of the Voskresensk Chemical Combine, Moskovskaya Oblast, whose appeal moved the Leningraders to join the struggle to exceed the plan of superphosphate production. The Voskresenskians succeeded in exploiting their inner potential and providing agriculture additionally with more than one thousand tons of mineral fertilizers.

The chief of the superphosphate shop, I. Borunov, said: "So we, too, did not count on the planned raw materials to fulfill our pledges. We had the support of the sulfuric acid shop, which promised to exceed its plan."

"They promised but didn't keep their promise?"

"They kept it."

"So where's the acid?"

And so now we are at the sulfuric acid shop, among gigantic furnaces and towers. All this mighty equipment is commanded by humans. There are few of them, but everything depends on their efforts. As we walk through the long passage, past the serried, droning furnaces, a thickset man approaches us from the opposite end. This is the senior operator I. Ivanov, who has worked 30 years at this enterprise. His small brigade currently services all the furnace facilities, whereas a bare year or two ago the old furnaces, most of which have now disappeared, swarmed with attendants. Now automatic devices help to burn the sulfur.

In reply to our question about the situation of the shop, Ivanov answered: "We're overfulfilling the plan. We have been prompt. Every month we exceed the target. About the breaking of the pledges? That's not our fault."

One of the workers interpolates: "It's a shame, all the same. We'd have produced so much more acid had the modernization been completed!"

And indeed, the modernization of the shop has bogged down half-way, or, more exactly, just before the finish line, where only two more units remained to be modernized. The operation of equipment on the basis of two types of raw materials involves considerable difficulties. For this very reason, now and then a ruddy pillar of smoke, which the Leningraders nicknamed "the tail of the fox," arises above the Neva Plant. This is a distinctive index of the technical level at the plant. The better this level is, the smaller the "tail of the fox" and the purer the atmosphere over the city. Despite the great demand for the acid, and despite the resolutions and orders to prevent air pollution, however, the sovmarkhoz discontinued the modernization of the shop.

We have seen, side by side with up-to-date equipment, people operating manually a 400-kilogram furnace rabble -- so little-effective is the working process at the old pyrite furnaces and so highly effective it is at the new furnaces! One would like to ask the workers of the sovmarkhoz to explain the neglect of such a useful measure which could have increased the output of such needed chemicals as sulfuric acid and superphosphate.

"Needed?" the director of the plant F. Mikhaylov asked us when we turned to him for an explanation. "As regards mineral fertilizers, the Leningradskiy Sovmarkhoz shows little interest in them. As for the sulfuric acid, it is shipped out like hot cakes, so to speak. So that sometimes nothing is left to produce superphosphate with. Just look at the figures."

We look and ascertain that the plant produces sulfuric acid far in advance of its plan, whereas its output of superphosphate in recent months has been teetering on the brink of fulfillment.

The chairman of the plant committee, I. Ivanov, confirmed: "Last year our collective produced several thousand tons of fertilizers in excess of the plan. Now our possibilities for helping agriculture are smaller."

No, they are not smaller. We have ascertained this while visiting the sulfuric acid and superphosphate shops.

The praiseworthy initiative of the workers is wilting at the root. The people have halted at a parting of the roads.

The attitude of the heads of the sovnarkhoz, who attempt to offset by reducing the production of mineral fertilizers the blunders of the Administration of Material-Technical Supply and Marketing, which failed to supply sulfuric acid to certain Leningrad enterprises, can hardly be termed commendable.

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## THE CHEMICAL INDUSTRY OF KAZAKHSTAN

[Following is a translation of an unsigned article in the Russian-language newspaper Kazakhstanskaya Pravda, Alma-Ata, 12 Dec 62.]

The development of chemical science and industry in this republic was described at a press conference in the offices of Kazakhstanskaya Pravda by the Deputy Chairman of the Republic Committee for the Coordination of Scientific Research Work, Member of the Kazakh Academy of Sciences M. I. Goryayev, the Chief Specialist on Chemistry at the Kazakh Sovnarkhoz A. R. Abdullayev, and the Chief Specialist at the Division of Ferrous Metallurgy and Chemistry under the Gosplan Kazakh SSR, Yu. A. Pod'yachev. Today we publish the text of their comments.

\* \* \*

Chemistry in our times has become a science of extraordinary, miraculous transformations of matter. Competing with nature, man is creating "artificial materials" with original properties. These materials are polymers -- substances consisting of giant molecules containing tens if not hundreds of thousands of atoms. By means of specific techniques, materials can be obtained that do not dissolve in acids and endure high temperatures, that are as light as cork and as elastic as rubber, that can stand any climate and conquer time.

The Member of the Kazakh Academy of Sciences Mikhail Ivanovich Goryayev declared that our republic is endowed with every resource for creating a highly developed chemical industry.

Chemical production in Kazakhstan can be developed by continually building new enterprises and expanding the



capacities of the existing enterprises without replacing their equipment. But considering the present tumultuous development of science, their output will not be able to compete either in cost or in quality with the output of the leading plants of this country. The way out? Introduce radical changes into the technology of the existing types of production and also develop the techniques of the new types of chemical production. This is among the most important tasks currently facing the Kazakh scientists.

With what resources is this task being solved? Unfortunately, in our republic, as compared with the others, chemical science is still young. It is represented by the Institute of Chemical Sciences in Alma-Ata, the Institute of Petrochemistry in Gur'yev, and the Chemico-Metallurgical Institute in Karaganda. What is the principal preoccupation of the staffs of these institutes? The problems of the chemization of agriculture.

The Institute of Chemical Sciences, Academy of Sciences Kazakh SSR, has developed an original technique of obtaining mineral fertilizers from the Karatau phosphorites by the cyclone fusion method. These fertilizers, free of harmful impurities, will replace superphosphates and, primarily, serve as livestock feed complements. The technique of the cyclone fusion of phosphates is now undergoing industrial tests at a Dzhambul enterprise.

The prospects for obtaining phosphoric fertilizers in the process of metallurgical production are highly promising. The Committee for the Coordination of Scientific Research Work has organized during the present year research and development work on the melting of slag-phosphates. This operation is incorporated into the metallurgical process without disturbing the latter: nodular phosphoric ore is added to the molten slag of nonferrous metals. The resulting melt is granulated in water. The slag-phosphate thus produced contains 15 to 16 percent phosphorus, whereas simple superphosphate contains only 13 to 14 percent. In addition, slag-phosphate contains copper. In a word, this fertilizer contains much more plant nutrients than superphosphate, and its production cost will be one-third as high. It need not be ground and it is easy to transport.

One of our chemical laboratories set itself the task of developing accelerants of plant growth. Preliminary experiments confirmed that nicotinic acid increases the yield of any crop. The expenditures involved are nugatory. The

process of seed treatment involves the consumption of only a few grams per hectare. The production of the new growth agent will be organized at the Karaganda Synthetic Rubber Plant, on the basis of an original flowsheet.

Trace elements, which add to the vital forces of plants and animals, are veritable vitamins of fertility. They are present in the tailings of concentrator factories. In Kazakhstan there exist tens of millions of tons of rich industrial wastes, and their reserves are continually increasing. These inexhaustible sources can serve to fully meet the demand for trace elements of not only our own republic but also of the other regions of the country. The first step has already been made here. The government of this republic has decided for the utilization of the wastes of the concentrator factories of nonferrous metallurgy.

The hydrolysis industry also is developing. More than two million tons of straw remain in the autumn on the fields of Tselinnyy Kray. To process it into feed yeasts, it was decided to build hydrolysis plants adapted to using this kind of raw material. The first enterprises of this kind in the Soviet Union are to be built in the virgin-land sovkhozes Izhevskiy, Moskovskiy, Presnovskiy, Leningradskiy, and Zavet Il'icha. By 1965 a number of these enterprises, with a combined total output of tens of thousands of tons of feed yeasts annually, will arise in this republic. This type of feed, rich in proteins, hydrocarbons, and vitamins, will result in a considerable increase in the yields of milk, the egg output of hens, and the productivity of hogs.

Plans also exist to build enterprises for the hydrolytic processing into livestock feeds of reeds, corn-cob stumps, cotton stalks.

Now take the problem of water desalting. Imagine a settlement lying on the shore of a small lake. The water there is bitter to the taste and not potable. Then a truck approaches. The driver flings one end of a hose into the lake and soon a jet flows from the tank standing on the truck. Pail after pail is filled. But the people are in no hurry to slake their thirst. They know that now they have a sufficient supply of good drinking water.

A fantasy? No. The problem of desalting saline water is being studied by the scientists of Kazakhstan.

Mikhail I. Goryayev said in conclusion that the range of activities of the Kazakh biochemists and microbiologists is unusually wide. It encompasses the production of bacterial fertilizers as well as antibiotics for animal husbandry. In the not distant future we will build special plants for the production of bacterial fertilizers, which increase the yield of any crop. The research plan of our Gur'yev scientists includes various interesting problems of the refining of petroleum, utilization of the synthesis of ion-exchanger resins, the recovery of rare elements, and many others.

To the question of what new scientific organizations might arise in this republic in connection with production needs, Goryayev replied:

"Quite fairly, much more is being asked of science at present, especially since the November Plenum of the CC CPSU. A number of scientific institutions is currently being transferred to the direct jurisdiction of production organizations. It would now be desirable to establish in Kazakhstan an institute for the chemization of agriculture. This will be of particular help in organizing the production of herbicides, whose shortage causes us to lose as much as 25 percent of the harvest. Farming cannot grow at a rapid rate without the help of chemistry," Goryayev emphasizes.

The Rudnyy Altay also has every foundation for becoming a base of the great chemical industry. There the activation of the Kenderlyk Black Coal Deposit and Shale Deposit alone will provide tremendous quantities of synthetic fuel. The ores of the Altay contain much sulfur, arsenic, and other elements valuable to the chemical industry. At Ust'-Kamenogorsk the Lead-Zinc Combine imeni V. I. Lenin is capable of organizing the by-production of exceptionally cheap antiseptics for wood impregnation, as well as of insecto-fungicides for combatting agricultural pests.

The vital role of the chemical industry in the development and technical progress of the national economy is widely known. At present it is hard to find a branch of industry, transport, construction, or agriculture that does not employ chemicals on a broad scale -- thus speaks the Chief Specialist on Chemistry at the Kazakh Sovnarkhoz, A. R. Abdullayev.

The Party is taking resolute steps to accelerate the development of the chemical industry. The Seven-Year Plan

which is being successfully fulfilled in this country is essentially a plan of the great chemical industry. In recent years scores of plants and large shops have been and are being built in the USSR, including Kazakhstan as well. This is not surprising, for our republic is a gigantic treasure-trove of the most varied chemical raw materials, easily accessible and costing little.

Endowed with such a formidable raw materials base, the young chemical industry of Kazakhstan is confidently straightening its shoulders. Its birthdate is recent. The overwhelming majority of its enterprises has been established in the postwar years. Prior to the Great October Revolution a single semi-primitive chemico-pharmaceutical plant existed on the area of our republic, in Chimkent.

Now the chemical industry of Kazakhstan is represented by first-class combines, plants, and shops, built in the most up-to-date manner. By now their products list encompasses 78 valuable chemicals. In the last two to three years alone this list was expanded by 13 products.

To be more specific, the principal chemical enterprises operating in our economic regions should be named. The Karatau Mining-Chemical Combine, which exploits the largest phosphorite deposit in the Soviet Union, can boldly be called a veritable pearl. Its output -- phosphorite meal -- serves as a splendid raw material for the mineral fertilizer plants of Kazakhstan and Central Asia.

One of these is located not far from Chulak-Tau, in Dzhambul. It was built during one of the postwar five-year plan periods. However, it still is continually being modernized and expanded. In the immediate future this plant will be enriched by yet another new shop for the production of compound nitrogenous-phosphoric fertilizer -- ammophos. Start-up work is already under way in this shop.

West Kazakhstan is a land of chemistry. The local Aktyubinsk Chemical Combine imeni S. M. Kirov dispatches large shipments of superphosphate and trace-element fertilizers to cotton and beet growers. The northwestern part of this region contains the fabulous Donskoye Deposit of Chromite Ore, a part of which is processed by the Aktyubinsk Chromium Compounds Plant. This young enterprise supplies valuable salts to various branches of industry. Then there is also the Petroleum Refinery in Gur'yev, on the shore of the Caspian Sea. Close to it another plant is being built,

for processing petroleum gases into polyethylene -- a miracle material which is a superb substitute for scarce and expensive nonferrous metals.

Another center of chemical industry has been set up in the Karagandinskiy Economic Region. A synthetic rubber plant operates in Temir-Tau. It processes such cheap raw materials as coke and limestone into calcium carbide, acetic acid, and acetaldehyde. Late last year its personnel put into operation the rubber production facilities. Many thousands of tons of synthetic rubber now are being used to manufacture tires and rubber accessories or for exports abroad.

Two years ago yet another remarkable type of production was put into operation -- the coke-chemical shop at the Karaganda Metallurgical Plant. Fundamentally it is a large enterprise in itself, one that produces many valuable products. This includes tens of thousands of tons of ammonium sulfate -- a valuable fertilizer that enriches with nitrogen the sovkhoz and kolkhoz fields. The same plant is also completing the construction of a rectification shop, where raw benzene will be processed into phenol, which is needed in the production of plastics and artificial fiber. And early next year a resin-cooking shop will be put into operation there. It will yield to the national economy naphthalene and many other chemicals.

This list of chemical enterprises of our republic could be continued. It includes the artificial fiber plant, which produces for the needs of the textile industry. It includes the hydrolysis plant which processes cotton husks into synthetic alcohol and feed yeasts. And it also includes the Chimkent Chemico-Pharmaceutical Plant, now a large modern enterprise whose drugs are known the world over.

Mention should also be made of the sulfuric acid shop recently opened at the Balkhash Mining-Metallurgical Combine. It produces sulfuric acid by trapping the waste gases. It must be noted that the processing of these gases at nonferrous-metallurgy enterprises constitutes a major potential for expanding the output of such a needed chemical as sulfuric acid and hence also of mineral fertilizers. The Kazakh Sovnarkhoz requested the State Committee for Chemistry to expand in all ways this necessary production. And we hope that our proposal will be approved.

What is most characteristic of our enterprises? It is their continual expansion, improvement in equipment and techniques, and the striving of their employees to provide more output to the State. This important work has especially gained in intensity following the May (1958) Plenum of the CC CPSU, which has opened a broad avenue for the chemical industry. On the basis of the Party-outlined program, the construction of new enterprises is in the offing. But this will be told in more detail by the Chief Specialist at the Division of Ferrous Metallurgy and Chemistry under the Gosplan Kazakh SSR, Yuriy Aleksandrovich Pod'yachev.

Pod'yachev said: "As noted above, the May Plenum of the CC CPSU has given impetus to the development of chemical industry in this republic. Compared with 1958, its gross output has increased 1.6 times. Now the production of mineral fertilizers, sulfuric and acetic acids, chromium salts, calcium carbide, and other chemicals is many thousands of tons greater. Valuable initiative was displayed by the workers of the Karaganda Synthetic Rubber Plant and the Dzhambul Superphosphate Plant, who have greatly surpassed their targets for the output of these products."

But these are only the first steps. The Seven-Year Plan envisages the further development of the chemical industry. Recently this plan has been extensively revised with a view toward accelerating the rate of construction of new and modernization of old enterprises.

Much attention continues to be paid to the production of mineral fertilizers. Tremendous importance is attached to expanding the Karatau Mining-Chemical Combine. Its ore extraction will sharply increase. The Aktyubinsk Chemical Combine will put into operation a granulating shop which will greatly improve the quality of superphosphate. Not far from Aktyubinsk will be started the construction of a new mine on the rich Bogdanovskoye Phosphorite Deposit.

Modernization and the use of advanced techniques will increase by many thousands of tons the output of fertilizers at the superphosphate plants. These plants also expect to start producing defluorinated superphosphate, which is in great demand among animal husbandmen, as a mineral feed complement.

New enterprises of this important branch will arise.

Plans exist to expand the Karaganda Synthetic Rubber Plant and the Kustanay Artificial Fiber Plant, and to build tire-repair enterprises in Karaganda, Tselinograd, Kustanay, and Pavlodar.

Of special interest is the construction of a chemical combine in Pavlodar. This highly up-to-date enterprise will produce many varied products, including detergents, viscose staple, and field and garden insecto-fungicides. A valuable output will also be provided by the Gur'yev Polyethylene Plant.

The program is conceived on a large scale. After its implementation Kazakhstan will be a center of the great chemical industry. How then is it being implemented? Compared with the preceding period, the implementation of investments in chemical enterprises has now been more than doubled. However, this, at first glance, favorable rate of construction does not meet the present requirements. To cope with the tasks, the rate of capital investments should be three times the present.

Now, the obstacles are still many. This was convincingly described by Comrade Khrushchev at the November Plenum of the CC CPSU. Yet another reason is unsatisfactory planning. Not all is going satisfactorily with the provision of sufficient design documents for the projects. As a result, for example, the commencement of the construction of a large number of enterprises is being delayed.

The fault for the lag in the construction of chemical enterprises is also borne by many sovnarkhozes of the republic, which failed to comprehend in its entirety the importance of chemical production to the national economy. They do not concentrate effort and resources on the decisive sector and do not strive for the prompt fulfillment of construction schedules.

The November Plenum of the CC CPSU demanded putting an end to this superficial and shortsighted approach to the development of the chemical industry. This demand of the Party shall be fulfilled.

The builders from the Koksokhimstroy Trust are doing good work on erecting the coal-dressing factory of the Karaganda Metallurgical Plant. There, the brigade of reinforcement under Comrade Timoshenko overfulfills its quota every day. The builders resolved to complete this project ahead of schedule.

## CHEMICAL INDUSTRY IN THE ESTONIAN SSR

[Following is a translation of an article by A. Kivit, Chief, Administration of Shale and Chemical Industry, Sovnarkhoz Estonian SSR, in the Russian-language newspaper Sovetskaya Estoniya, Tallin, 12 Dec 62.]

The report of Nikita S. Khrushchev and the speeches of the participants in the November Plenum of the CC CPSU emphasized the correctness of the policy of further developing the chemical industry, increasing the production of plastics, synthetic resins and fibers, mineral fertilizers, herbicides, and other chemical products.

The chemical industry is called upon to play a tremendous role in the struggle to further develop our national economy. The achievements of modern chemistry broaden the possibilities for the growth in national wealth, for the production of new, improved, and cheaper means of production and consumption.

Four and one-half years ago, in May 1958, there was convened that plenum of the CC CPSU which had laid the foundation for the accelerated growth of the chemical industry. Since then the chemical industry of our republic has grown appreciably. A major stride forward was made by the shale-processing and gas industry. Its output of products from shale has increased by 169 percent. There has been a signal increase in the output of enterprises for the production of mineral fertilizers, paints and lacquers, polyphenols, and various chemical consumer goods. The production of new types of synthetics is growing rapidly.

During this period, for the first time in world practice the processing of shale into aromatic hydrocarbons,



diphenol ketone resin, and tanning agents was organized. It should be noted that the principal increment in the output of the most valuable chemicals was achieved by improving the techniques of processing of shale and phosphorites, due to the modernization of the existing equipment.

The engineering services of the enterprises of the Administration of the Shale and Chemical Industry, Estonian Sovnarkhoz, have been reinforced with competent specialists. This was accomplished by simplifying the structure and reducing the administrative-clerical services. The staff of the project-design bureau of the Shale Processing Combine imeni V. I. Lenin was increased to 50 persons. The research team at the Central Chemical Laboratory was increased by 23 engineers. The local public design bureau, with its staff of more than 130 persons, has been a major factor in technical progress. The designers at the combine have drafted projects for the complex automation of producer-gas facilities, the compartment-furnace shop, and the ropeway shop. Projects for the mechanization of the repair of producer-gas facilities also have been drafted. Owing to the modernization of compartment furnaces alone, the output of town gas is increasing by more than 30 percent. Many labor-consuming processes are being mechanized and automated. This will be of considerable benefit -- more than 130 persons will be relieved for employment in the new chemical shops.

Owing to the modernization of producer-gas facilities, their productivity increased by 60 percent.

Our shale basin has attained signal successes in mechanizing the tunneling of mining entries. New steps to eliminate manual labor have been made.

It is known that the extraction of shale from mechanized levels increases the labor productivity of miners 2.0 to 2.5 times and cuts the extraction cost. This increases considerably the profitability of the chemical products obtained from shale.

In recent years new chemical shops have been put into operation in the shale basin area: a shop for processing natural gasoline, and a phenol-formaldehyde and carbomide resins shop. The Kiviyl Shale-Chemical Combine has built a diphenol ketone resin shop. Its output successfully replaces the expensive imported mastics and adhesives. An installation for producing a tanning agent from shale has been built. Work by the Scientific Research Institute of

Shales has fully demonstrated the feasibility of using not only aqueously soluble but also oil phenols in the production of tanning agents. A new pilot industrial installation for the thermal processing (with a solid heat transfer agent) of fine-grained shale was put into operation.

Plans exist for putting into operation during the first quarter of the next year a formalin plant, and by the year 1965 -- a synthetic detergents shop and a granulated superphosphate shop, at the Maardu Chemical Combine. A nitrogenous fertilizers plant is scheduled to be built at the Shale Processing Combine imeni V. I. Lenin. A new large building will be erected for the chemico-pharmaceutical plant. By now certain experimental and pilot-industrial shops and facilities are in operation or already under construction. They are facilities for the low-temperature carbonization of the heavy fractions of shale tar, dephenolization of liquid wastes, concentration of phosphorites by the electrostatic separation method, and others. In the next two years a large pilot installation for the production of highly concentrated sulfuric acid will be built at the Maardu Chemical combine. This combine has modernized its sulfuric-acid and superphosphate shops and put into operation the first stage of a flotation factory.

Our chemical industry leans on inexhaustible resources of the low-cost natural raw material [shale].

The struggle to establish the great chemical industry is a struggle for new successes in the rapid construction of the material-technical base of communism.

The further development of the chemical industry of our republic, however, is beset by major shortcomings. It must be noted that the level of superphosphate output is 35 percent below the capacity of the corresponding shift at the Maardu Combine. This happened because the planning organs do not assign sufficient sulfuric acid and apatite. The new concentration factory is not as yet working, being utilized only for experiments. It turned out that we have built this flotation factory far in advance of the organization of the production of flotation agents at other chemical plants of this country. Here the planning allowed made a major omission.

The Moscow Electrode Plant and the Serp i Molot Plant have completed successfully the industrial tests of shale coke. This is a signal victory of our science and technology.

This also involves the need to build a plant for the production of very scarce electrode coke from shale tar. Such a plant has never before been planned. But now it is urgently needed. Its output will help to attain new successes in the production of graphitized electrodes and of anode mass for the aluminum industry.

Following the opening of the large-capacity formalin plant at the Kiviylä Combine there will arise some surplus of formalin. It could be shipped to other republics. But it could also be used to produce a highly valuable chemical -- polyformaldehyde, one of the new polymers. This polymer can replace a number of plastics, wood, ceramics, ebonite, and metals. The development of techniques for the production of this all-purpose commercial plastic is being completed by the Institute of Plastics, State Committee for Chemistry. Serious consideration should be given to utilizing the surplus formalin to produce polymers.

It must be noted that the construction of new chemical enterprises proceeds at an insufficient rate, often far behind schedule.

Some of our chemical machine building enterprises are engaged in fabricating extraneous products. In particular, the Tallin Machine Building Plant is greatly overburdened with extraneous assignments, and therefore it is not capable of meeting the needs of the shale-chemical industry. It should be specialized in the production of equipment for the shale and chemical industry.

In his speech at the Plenum of the CC CPSU, Comrade Khrushchev declared: "It is time, finally, to put an end to the superficial and shortsighted approach to the development of the chemical industry, to think big on the national scale, and to soundly appraise economically the tremendous benefits deriving to the national economy from the development of the chemical industry." At the plenum it was pointed out that so far a lag has been allowed in fulfilling the targets as to the development of this industry. The reorganization of the Party's guidance of the national economy shall doubtless assure a faster development of the chemical industry.

## BUILDING THE SVETLOGORSK ARTIFICIAL FIBER PLANT

[Following is a translation of an article by Ye. Zhukovskiy in the Russian-language newspaper Sovetskaya Belorussiya, Minsk, 2 Dec 62.]

To visualize the grandeur of this project -- the Svetlogorsk Artificial Fiber Plant -- one should ascend to the roof of the main building. Thence the entire panorama of the many objects of the 100-hectare project site unfolds before one's eye.

The project has already taken clear shape. You can behold the half-kilometer lattice-walled cord shop, the repair shop compound, the chemicals' storage, and the buildings of the dining hall and plant administration. The erection of the huge viscose shop is beginning. All these are parts of the future artificial fiber plant. And side by side there arise the impressive buildings of the reinforced concrete components and large-panel housing construction plant.

These are industrial objects. But the builders from Trust No 20 also are erecting the city of Svetlogorsk. It has now mushroomed. White-walled residential buildings and administrative buildings have appeared on its streets. And a bakery, a polyclinic, a utilities combine, stores, and other projects are under construction. A self-contained housing project is already arising within the young city as well. Svetlogorsk will become a major industrial center. Next to Gomel', its population will be the largest in the oblast.

The fulfillment of the construction program slated for the present year requires materials -- metal, precast reinforced concrete, cement, pipe, lumber, rock and other materials. This is the truth. And the quantities of building

materials needed were fixed at the beginning of the year, in concrete figures and volumes. But at the beginning of March the sovnarkhoz and the Collegium of the Ministry of Construction Belorussian SSR adopted a joint decree reducing somewhat the required quantities of these materials. Thereupon Svetlogorsk was advised about the revisions in the allocations. This was the third time. However, even these strongly reduced allocations are being incompletely implemented. This is really being done too frequently.

Consider the revisions of the metal allocation. Instead of the 5,280 tons needed, the sovnarkhoz and the Collegium of the Ministry of Construction consented to 5,911 tons. But they assigned funds for only 5,484 tons, and they actually allotted even less. The same thing happened with cement, pipe, timber, and roofing materials. The shortage of metal, in quantity and variety, leads to a situation in which the Svetlogorsk Trust No 20 fabricates precast reinforced concrete in a technological sequence that conflicts with the requirements. This has led to the pile-up of many prefabricates on the construction sites, prefabricates that still cannot be utilized. The Minsk Trust No 2 of the Stroy-industriya does not deliver precast reinforced concrete on schedule. This affects the completion of the construction and installation work on the storage area, the nitrogen-oxygen installation, and other facilities.

The concrete and mortar mixers operated by this trust itself are of insufficient capacity to meet the demand for concrete and mortar. Now that new mixers have been put into operation, it would seem that the situation should improve. But now, the cement and crushed rock still are not here. This has led to another disruption of the production of precast reinforced concrete, to mass idling of people and equipment. The same situation exists as regards the deliveries of roofing and heat-insulating materials. The girders and roofing slabs have already been installed in the cord-shop building, but as yet only half of the roofing materials needed for this building have been received.

The construction of this artificial fiber plant is being handled, in addition to the prime contractor -- Trust No 20, by many subcontractors. When you listen to them, you are reminded of a picture from the well-known fable of Krylov: the swan aspires to the clouds, the crab moves backwards, and the pike is urged toward the water.

Yes, the subcontractors -- the administrations and sectors of the Minsk trusts Beltransstroy, Santekhmontazh, Promtekhmontazh and others -- do not perform well. This lies on the conscience of those trust heads who do not visit the project and fail to coordinate the operation of their administrations and sectors with that of the prime contractor. However, the heads of Trust No 20 themselves also are not blameless.

Recently the project was toured by the deputy ministers Belorussian SSR Comrades Krul', Paperno, Koshchelev, and others. They ascertained on the spot the shortage of the principal building materials, the lack of coordination between the prime contractor and the subcontractors, and the entire confusion reigning on the project site. It would seem that they would do all in their power to eliminate the shortcomings on the spot, to rescue this shock project from the mire into which it has sunk. Actually, however, nothing was done about it, according to the unanimous opinion of the builders. Each visiting V.I.P. was sympathetic and promised something, and then left -- like the last swallow of summer. The chief of production administration at the ministry, Comrade Alyavno, spent a week on the site, but his help, too, proved to be so unsubstantial that it is not worth mentioning.

The builders working on this project include more than 170 Party members and upward of 500 Komsomol members. But how is the competition for Communist Labor titles organized? The secretary of the Party chapter diffidently names the figure -- 310 persons participate in this drive. Yes, that is not many. The "khozraschet" [financially non-subsidized] brigade of final production under the direction of Viktor Pyatnitskiy might serve as an example to many others. But its experience and enthusiasm are inefficiently propagandized among other brigades on the site. And recently Pyatnitskiy's brigade has been lacking a sufficiently wide front of operations. This already is the fault of the heads of the trust and of the Party chapter.

The young, growing city of Svetlogorsk already has an acute need for medical and children's institutions, a cinema, trading and public-dining enterprises, and accommodations for other civic and communal institutions. The government of the republic had as early as last year instructed the sovnarkhoz, the ministries of public health and culture, the Belkoopsoyuz [Belorussian Association of Cooperatives], and other agencies to erect the buildings to house their

branches and enterprises. Not one of them, however, has yet fulfilled this directive.

The construction program for the next year will be far broader, as regards the artificial fiber plant alone. Therefore, there will be larger numbers of workers, engineers, and technicians, and of their families. The demand for medical and children's institutions and for stores and other communal and civic facilities will be still greater. This should be considered by now so as to solve fundamentally the urgent problems.

The Svetlogorsk Artificial Fiber Plant is among the most important projects of the Seven-Year Plan. The attention of the republic organizations should be riveted on this project.

## INTRODUCING AUTOMATIC EQUIPMENT AT THE VLADIMIR CHEMICAL PLANT

[Following is a translation of an article by  
V. Pavlov et al. in the Russian-language news-  
paper Trud (Labor), Moscow, 4 Dec 62.]

Our Soviet land is one big construction site. New plants, factories, electric power stations, and housing are everywhere. We need a great deal of pig iron, steel, copper, lead, aluminum. And although their production and extraction are increasing each year, we still lack enough metal. That is why we were so deeply stirred by N. S. Khrushchev's speech at the November Plenum of the CC CPSU, by his words about the need to expand in all ways the production of plastics. Plastics products are cheaper and stronger than their ferrous and nonferrous metal counterparts. As for the raw materials needed to produce these "irreplaceable substitute," they are super-abundant.

We, chemists, are among those on whom the decisions of the November Plenum of the CC CPSU primarily call to make their own contribution to the construction of communism. We are at the most advanced outpost of the Soviet economy. And since that is so, we should respond by new concrete deeds to the appeal of the Party.

The personnel of our [Vladimir Chemical] plant produces plastics and the most varied plastics products -- shaped parts of pipelines, pipe fittings, valves, acid-resistant apparatus, etc. Quite recently this production required mountains of metal. Plastics can and should increasingly replace metal!

Our products include vinyl plastic pipe of various diameters and purposes. This is a light and strong and corrosion-proof pipe. Pipe of this kind is virtually impervious



to wear. Previously we fabricated it by the rolling method, which is not very productive, and certain operations had to be performed manually. Now new equipment has been installed on this sector; we are successfully introducing the continuous process, which involves the automatic implementation of all the operations of the fabrication of plastics products: molding, cooling, cutting, and unloading of pipe sections. Not surprisingly, the productivity of our labor has doubled.

But of course, the new equipment alone has not led to this accomplishment. No matter how clever a machine may be, without attendance by a human being who is thoroughly familiar with it it is simply dead. We ardently undertook to master the intricate automatic equipment. The members of this brigade are young specialists, all with secondary education. V. Pavlov and L. Chaleyev are correspondence students at the Ivanovskiy Chemico-Technological Institute, and V. Antropov is a tekhnikum senior. We have carefully studied the design of every component of the new machinery, familiarized ourselves thoroughly with the new techniques, and concluded that, to assure successful operation, each of us should possess two or three different skills, so as to help a comrade or replace him whenever necessary.

The searching and persistent studies brought good results: now the members of this brigade are completely interchangeable. We began to dispense with adjusters -- now we ourselves adjust the machinery. Now this happens to also be a major potential, for it saves a great deal of time. Thus while initially we produced 150 kilograms of pipe per hour with the new equipment, now this figure exceeds 300 kilograms.

Much has been accomplished. But now, studying the decisions of the November Plenum of the CC CPSU, we arrived at a unanimous conclusion: there is to be no resting on our laurels, we must stride boldly forward toward new frontiers! A new schedule was discussed at a meeting of the brigade. The available resources were carefully weighed and it was found that our potential is still quite large! First and foremost, equipment must be more fully utilized, exploited to the hilt. Increase the intensity of equipment -- such is our principal potential!

Next year we expect to produce large quantities of pipe in excess of the plan. Considering that one ton of chemical raw material can serve to produce five and one-half times

as much products as one ton of metal, it follows that in a single month our four brigades alone will save the country hundreds of tons of pig iron, steel, cooper, and other scarce materials. That is well worth the effort!

We cited this figure as the total for all the four brigades which service the automatic line during the 24-hour period. And we did it deliberately: the approach of our own brigade toward increasing the operating intensity of equipment and maximizing the productivity of labor at each working post has already been emulated by our fellow brigades that work during the other shifts, with success. The brigades of V. Detenyshev, K. Kuritsyn, and S. Bystrov have also mastered perfectly the operation of the new equipment which made possible its smooth transfer from one brigade to another at the end of the shift, without any stoppage. This alone enables us all to produce an additional tens of tons of high-quality pipe.

Currently many brigades and shops are re-examining their socialist pledges. Every collective is full of desire to achieve a new production record. "More Substitutes of Metal for the Homeland!" this is the slogan under which socialist competition develops at our plant.

We believe that we shall accomplish our goal and reach new frontiers. But the struggle for maximizing labor productivity at every working post should not be confined to our own chemical plant alone, we believe. We appeal to the collectives of the sister chemical enterprises: join this struggle, friends! Let's compete! Let's act so that we all, fighters on the front line of the Soviet industry, rapidly pass on from one success to another, raise labor productivity, utilize equipment more productively, and provide more output to our beloved Homeland.

At the same time we would like to turn by means of this newspaper to the collectives of all the enterprises which consume our products. May you use our plan-exceeding plastics products to build only plan-exceeding machines, machine parts, bearings, and ships! Let's meet more often -- this will help both you and us to improve the performance and to learn about the claims and needs of both suppliers and customers. This will be of mutual benefit to our success!

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## CHEMICAL-INDUSTRY PROJECTS FOR 1963

[Following is a translation of an article by V. Nezhinskiy in the Russian-language newspaper Stroitel'naya Gazeta (Construction Gazette), Moscow, 16 Dec 62.]

In the present year our contractor organizations carried out a volume of construction and installation operations on chemical-industry sites that was nearly equivalent to the entire volume of these operations carried out in the years 1955 to 1958. And in 1963 the capital investments will increase by an additional 36 percent, reaching nearly 1.7 billion rubles.

Mineral fertilizers, synthetic rubber, plastics, detergents, paints and lacquers, carbon black, tires, latest synthetic fibers, aniline dyes, and hundreds of other products needed to develop the national economy, are already being produced by our chemical industry. What then will be the contribution of builders and installers to the capacities of this industry during 1963?

Four years ago the output of mineral fertilizers in this country was approximately 12.5 million tons, whereas next year alone the increment in capacity will exceed seven millions! By 1965 the nation's fertilizer output will reach 35 million tons.

As with mineral fertilizers, large-scale investments will be implemented during 1963 in insecto-fungicide plant projects scheduled for activation in 1964.

A number of enterprises will build shops for the production of new highly effective preparations -- simazin and atrazin -- for the eradication of corn weeds, and dalapon for beet weeds. Large-scale construction work will be needed

to establish the production of defoliants -- those "assistants" in the harvesting of cotton. These poisons destroy the foliage of the cotton plant prior to its harvesting and thereby make possible the mechanization of harvesting.

The caprone, viscose staple, rayon, and cord plants and shops will make it possible considerably to expand the variety of consumer goods. New fabrics, knitwear, hosiery, underwear, and upper garments will be provided to the population of our country. The use of industrial caprone in the form of cord and high-strength viscose for automotive tires will greatly prolong their service life. The fishing industry will receive super-strong non-moldering nets and fishing gear, cables, and ropes. All this must be assured by the builders by putting into operation during 1963 new capacities for the production of chemical fibers at Barnaul, Balakovo, Cherkassy, and Daugavpil's.

In addition to the projects scheduled for completion in 1963 we shall continue work on the long-term projects -- orlon and lavsan shops. The orlon and lavsan fibers are far superior to many natural fibers, and products made of these fibers substitute fully for wool products and fabrics and even surpass them, being lighter and stronger, crease-resistant, impervious to moldering, and washable. The construction of the shops for the production of these materials is entrusted to the builders in Kurskaya and Saratovskaya oblasts. The local Party and economic organizations should pay special attention to these projects.

The year 1963 will be a year of accelerated construction of the plants for the production of phenol-formaldehyde and carbamide resins and adhesives, polyvinyl chloride, polyethylene, polystyrene, silicones, ion-exchanger resins, caprolactam, and rubber, as well as of the raw materials involved.

This is exactly the output which makes it possible to expand the production of consumer necessities and to utilize plastics in industry in lieu of ferrous and nonferrous metals.

Corrosion-proof, high-strength lightweight structural components from plastics will be of great help also to builders. The projects scheduled to be started in 1963 will make it possible to produce plastics in such quantities that as early as during 1964 and 1965 it will be possible to use them to fabricate many structural components

and elements, as well as plumbing fixtures, roofing materials, and other building products.

Phenol-formaldehyde and carbamide resins will make it possible to replace quality lumber by chipboard. Polyvinyl chloride resins will be processed into linoleum, tiles, pipe, and gutters. Polystyrene will be used as a foaming agent in the fabrication of heat-insulating board, and shock-resistant polyethylene will be used in the manufacture of plumbing fixtures.

Polyethylene and polypropylene will be used for the industrial manufacture of water-supply and heating pipe and pipe fittings. Glass plastics will be used as roofing, wall, and railing materials. Laminated plastics will serve as finishing materials, and epoxy resins and vinyl perchloride will be processed at chemical plants into oil-free high-strength, rapid-drying paints and lacquers.

Plastics production will be mainly located in the regions of the petroleum refining industry, and the construction work involved will be handled by the builders in Sterlitamak, Salavat, Kuybyshev, Sumgait, and Groznyy.

It must be noted that in 1962 the Sverdlovskaya, Luganskaya, and Zapadnokazakhstanskaya oblast organizations and sovnarkhozes have consistently been underfulfilling the schedule for the construction of ion-exchange resin, caprolactam, and polyethylene shops. The heads of the construction organizations underestimated the importance of these products to the national economy. This should not recur in the next year.

It is known that the principal yardstick of the quality of a tire is its "roadability." Producing new, high-strength synthetics, the chemical industry supplies the tire industry with high-strength caprone cord for tire casings, and with high-strength varieties of rubber that often surpass in quality natural rubber.

To organize the production of these new materials and develop new types of tires, new modernly equipped production lines will have to be built. In 1963 the tire industry will be re-equipped. The builders will complete and put into operation new tire output capacities at the Volzhsk and Omsk plants. The main effort, however, will be focused on modernizing and intensifying the existing facilities, on expanding construction in Mordovskaya ASSR, Altayskiy Kray, and the Volgogradskaya and Yaroslavskaya oblasts.

Chemical-industry projects are being inadequately supplied with production equipment. Chemical machine building does not keep pace with the rapidly growing demand of the chemical industry.

In the new year 1963 the machine building and procurement organizations should concentrate their effort on meeting the needs of the chemical-industry projects, and primarily the especially important projects and those scheduled for the most immediate completion.

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## EXPEDITE THE CONSTRUCTION OF CHEMICAL-INDUSTRY PROJECTS

[Following is a translation of an article by P. Novikov et al. in the Russian-language newspaper Stroitel'naya Gazeta (Construction Gazette), Moscow, 19 Dec 62.]

The Builders from the Luganskkhimstroy [Lugansk Chemical Construction] Combine Propose: Let Us Start Socialist Competition for the Fulfillment of Seven-Year Plan Targets by Every Construction Site and Sector and Brigade Within Six Hours [of every seven-hour work shift]. The Extra Hour Gained Means the Pre-Term Activation of New Chemical Enterprises.

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The Party is solving the problems of nationwide construction wisely and boldly, in the Leninist manner. In October 1961 the 22nd Party Congress adopted a program which expounds explicitly and clearly the plan of building the communist society in our country. And recently, at the November Plenum of the CC CPSU, the Party made a new, revolutionary step forward, adopting the decision to re-organize from bottom to top the management of the entire national economy. These measures, worked out by the collective intelligence of the Party and nation, will accelerate the rate of creating the material-technical base of communism and bring closer the bright future of our Homeland.

There is hardly any one who has not been profoundly stirred by the decisions of the plenum, by the remarkable, well-argued report of Nikita S. Khrushchev. With Leninist directness, the shortcomings hampering the technical progress in industry and construction were subjected to criticism, defects in the organization of design and development work were uncovered, and a decisive blow was dealt

to the economically unsound planning which is a legacy of the era of Stalin's personality cult. The Party brought to the special attention of the planning organs the development of the chemical industry as the most progressive industrial branch of the national economy.

Scientists, chemical-industry workers and we ourselves, the builders of the great chemical industry, are thoroughly familiar with its great advantages. Chemical materials can be processed by the highly productive injection-molding and pressing methods into products of any shape and design, with valuable operating qualities such as heat resistance, corrosion resistance, and stability in aggressive media. Chemistry can provide in abundant quantities strong and low-cost substitutes for ferrous and nonferrous metals and lumber, add to the amenities and standard of living of the Soviet nation, and elevate substantially agricultural productivity. It is merely to be deplored that all these advantages of chemistry, capable of producing tremendous wealth, have not been appreciated earlier.

Our chemical industry started its vigorous growth only after the May (1958) Plenum of the CC CPSU. That was the starting year of many new construction projects from which we already are reaping the "harvest." The year 1962 is the first year in which this big new construction program began to pay off. Compared with 1953, our output of synthetic and artificial fiber in 1962 will have been 4.4 times as high.

But even this increase no longer satisfies the country, which struggles for an abundance of material blessings for the workers. Therefore the Party now has placed the chemical industry in a preferential position as compared with other industries.

The Soviet State is providing new, still more favorable conditions for the builders of the great chemical industry. Chemical industry will grow at a faster rate. Next year the capital investments in this branch will be 36 percent higher than in the present year, reaching a volume with which few other industries can compare. Thus, for example, while the investments in chemical industry in 1958 were half as large as in ferrous metallurgy, in 1963 they will be nearly 10 percent higher.

The development of chemical industry is becoming a nationwide cause, and it is a great honor to work in this branch of industry.



We are immeasurably proud that we are directly concerned with establishing the chemical industry. The task of erecting hundreds of new plants, and expanding hundreds of the currently operating plants, rests on our shoulders. And we should build not as before but two to three times as fast. Otherwise we shall not reach that grand scale of development of the chemical industry toward which the Party orients us.

The workers of the Luganskkhimstroy Combine have built tens of new production installations at the Lisichansk and Rubezhanskiy chemical combines during the four and one-half years since the May Plenum of the CC CPSU. Last year the new capacities activated were 12 times as large as in 1958, and in 1962 they will have been 16 times as large. The variety of output for industry and agriculture has been expanded. Our enterprises provide the country with various mineral fertilizers, ammonia, alcohols, dyes, and raw materials for plastics. The Lisichansk Chemical Combine expects to build large shops for the production of vinyl acetate, butanediol, carbamide and polyamide resins, and many other chemicals.

Are we capable of building and activating new types of production within shorter periods of time? Indisputably yes! The isolation of construction organizations into an autonomous branch of the national economy will improve the quality of management of construction and bring greater order and efficiency into the conduct of construction operations. But still it must be borne in mind that no matter how perfect the system of management of construction may be, the decisive role in accelerating the pace of construction belongs to those who work directly on the sites. It is on our energy and intelligence, on our will and persistence, that success depends.

One of the main trends in the development of the national economy, as outlined by the November Plenum of the CC CPSU, is the wide and broad struggle to utilize the production potential.

Our daily work is rich in creative initiative and labor-saving suggestions. Following the 22nd Party Congress, the collectives of certain enterprises of Luganskaya Oblast resolved to fulfill their shift targets one hour earlier and to use the hour thus saved to produce output in excess of the plan. The competition for the "Lugansk hour," as it was popularly nicknamed, was joined by our builders. Recently we examined its results. The brigade of D. R. Goncharenko fulfilled 6,145 rubles of construction and

installation operations in excess of its plan; G. D. Gomolyako, 6,100 rubles; and A. A. Knysh, 4,400 rubles. The Liskhimpromstroy Trust alone in the first nine months of the present year carried out 110,000 rubles of plan-exceeding construction operations.

We pose this task: every brigade, every worker, should start fulfilling their shift quotas within six hours and utilize the seventh hour to produce in excess of the plan.

We propose starting a competition for fulfilling the shift quotas in six hours and using the extra hour gained to complete enterprise projects ahead of schedule. We hope that the collectives of all the chemical-industry projects shall join this competition.

Of course, the organization of this competition is no simple matter, not to be done with haste. It requires tremendous effort of managers and the local Party and trade-union organizations. It is important to make this a mass movement, participated in by not only the leading brigades, sectors, and administrations, but also by the laggards. The pace setters, the paragons of high productivity, should set the example to the laggards and help them to improve themselves.

The saving of one hour of working time per shift means overfulfilling one's daily quota by 16.6 percent. On the rational scale this means saving many millions of rubles of output. But in order to accomplish this, every minute of working time must be exploited, initiative and skill must be displayed, and the means of mechanization must be thoroughly exploited.

The brigade of I. I. Skuridin works on the project of the Lisichansk Chemical Combine. Its members are carpenters, plasterers, painters, slab-layers, and glaziers, and they carry out the over-all finishing operations on the production shops. Skuridin himself and his friends are passionate champions of mechanization. They have introduced atomizers, thus tripling the labor productivity of plastering operations, and used spray-guns to paint the metal structures, thus raising output by 230 percent. This zealous attitude toward the mechanization of working processes should be emulated by all the builders of the great chemical industry.

On-the-job training is a most important potential for raising labor productivity. A builder who has attended

skill-raising courses can always be distinguished from one who has not. The complex brigades of stone-masons A. D. Shcherbakov and V. D. Zakharov are famous at the Liskhim-promstroy for their high output and quality of performance. Every worker in these brigades is cross-trained in three or four skills, thanks to attending the evening courses instituted directly on the construction site.

Our administrations pay great attention to training their worker cadres. This year 30 percent of builders with various occupations underwent the on-the-job-training system and received promotions to higher categories. The electro-welders on every production sector were trained in the advanced pool ["vannovaya"] method of welding. But is this reason for self-satisfaction? Of course not. All of our builders should become highly-skilled specialists, masters of their occupation, and therefore the network of skill-raising courses should be still further expanded.

To complete successfully, every worker should be clearly aware of the means by which he can raise his output to the newly fixed level, and of the time it should take. This is not merely a topic for discussion but also a question of concrete concern for properly scheduling the work, maintaining tools in efficient condition, and deploying the labor force correctly. Khrushchev noted that there is always room for self-improvement in every worker. The potential of every worker should be uncovered, it should be the common property of not just himself but of all and everyone.

It is time to declare a most ferocious war against shoddy construction. Why is it that a lathe operator always keeps his machine clean while a plasterer does not consider it necessary to remove the dirt and sweepings from his working post? A high level of work means not only a high productivity but also a high quality of construction.

The honored Ukrainian kolkhoz member N. G. Zaglada is vitally concerned for the honor of the grain grower, and the famous milling-machine operator at the Kirov Plant, I. D. Leonov, is just as concerned for the good name of the Soviet worker. Their concern and their ideas are understandable and close to us. Nevertheless, our ranks still include quite a few people to whom the good name of the builder is not precious. They are slackers, loafers, drunkards, and shirkers. They cause great damage to the common cause. Essentially they are disorganizers of communal production.

And we shall not cope successfully with our tasks to build the great chemical industry if we tolerate these people. Through common effort -- that of the Party, Komsomol, and trade-union organizations, of the entire public -- with an iron hand, we should educate these strays and bring them back onto the correct path of life. For this precisely was meant by Nikita S. Khrushchev when, at the Plenum of the CC, he appealed to us all to take steps to increase the feeling of responsibility and discipline in every worker, engineer, and executive, for the fulfillment of the directives of the Party and Government, for the fulfillment of the entrusted task, so that every worker would manifest genuinely revolutionary zeal, devote himself wholly and unreservedly to the great cause of building communism.

The builders of the great chemical industry are being watched by the entire nation. Our successes bring joy to all, and our failures, dismay to all. Therefore we should apply all our skill and effort to building the chemical-industry enterprises rapidly and very competently and putting them into operation ahead of schedule. It is a point of our honor as workers to achieve this goal.

## POLYSTYRENE SHOPS ARE OPENED AT THE GORLOVKA PLANT

[Following is a translation of an article by N. Nozdrachev and V. Pankratov in the Russian-language newspaper Stroitel'naya Gazeta (Construction Gazette), Moscow, 19 Dec 62.]

Two large-capacity polystyrene shops, built at the Gorlovka Nitrogenous Fertilizers Plant, were completed during the present year by builders from the Khimstroy Administration of the Yenakiyevtyazhstroy Trust. Polystyrene from these shops is being supplied to Moscow, Kiev, L'vov, Novosibirsk, and Omsk, where it is used to manufacture television sets, refrigerators, motor vehicles, and medical instruments.

The starting raw material, styrene, is as yet being received by the Gorlovka chemists from Voronezh. But they have already installed production facilities which will avert the need for having styrene hauled in from Voronezh.

The styrene production facilities should have been the first to be completed, but the Gosplan Ukrainian SSR failed to allocate a compressor, a gas blower, and other equipment. Last spring the construction of styrene shops was halted. The work was resumed only in the fall, when the equipment began to arrive. The builders and installers worked full steam.

So now the installation is ready, and the State commission has accepted it officially. In the immediate future the first batch of styrene will be produced.

The plant has been provided with a large and intricate complex of facilities: several tens of structures.

Initiative and a creative attitude toward the task -- that is what decided the success of the matter. The Khar'kov Vodokanalproyekt planned to design the purification facilities in the old fashion -- from monolithic reinforced concrete. The builders could not agree to such a solution. They used precast reinforced concrete. As a result, labor expenditures were more than halved.

The method of the modular installation of production equipment justified itself fully. The rectification columns and condensers were assembled by installers from the Administration No 211 of the Khimmontazh directly on the ground into larger units and then lifted by means of cranes and winches.

More than 700 young men and women worked on the construction site. More than half of the brigades consisted of Komsomol youth.

Having completed the work on the styrene installation, the personnel of the Khimstroy Administration started to build the porous-plastic and foam-polystyrene shops, scheduled for completion in 1963.

## EXPANDING THE VOSKRESENSK MINING-CHEMICAL COMBINE

[Following is a translation of an article by G. Kozlovskiy and L. Kravchenko in the Russian-language newspaper Stroitel'naya Gazeta (Construction Gazette), Moscow, 21 Dec 62.]

The Voskresensk Mining-Chemical Combine near Moscow is famous far beyond the boundaries of its home-town. In the next three years the output capacity of this enterprise will increase nearly 3.5 times as regards phosphorite concentrate and 6.5 times as regards phosphorite meal.

The growth of this enterprise is based on the radical modernization of its production facilities and diversification of its production. It will be necessary to develop six new quarries, to build a concentrator factory and a flotation factory, a drying and grinding shop, and a repair and machine plant with a complex of shops for the capital repair of transport, mining, and concentrating equipment.

Speaking candidly, the prospects for the Yegor'yevskiy and Lopatinskiy mines, on whose basis this combine has arisen, are tremendous, and the field of activity is wide. But these prospects threaten to remain mere prospects unless order is brought into this highly important construction project. Judge it for yourselves. The prime contractor, the Construction Administration No 3 of the Moscow Oblast Sovnarkhoz, is now in its second year of laying a 1,200 meters long water supply conduit through the Yegor'yevskiy Mine. So far... 100 meters have been laid. The dike of the open-water reservoir is being built at a similarly sluggish pace. Seventy-five thousand cubic meters of soil were to go into its construction, but so far only 3,000 were laid. The prime contractor is apparently being emulated on sector No 2 of the Orekhovo-Zuyevo Construction Administration of the Santekhmontazh Trust (head: Comrade Kotirev).

Last year a water conduit was laid from the housing settlement of the Yegor'yevskiy Mine to the industrial site. During the winter the conduit turned to a sieve -- the frosts cracked it up. As a result the aforementioned sector still cannot put it into operation.

Comrade Kudin, head of the Mokryanskiy Stone Quarry, also made his own "contribution" to building the combine. Instead of the crushed rock needed to prepare high-strength concrete, he sent from Zaporozh'ye large rock chunks consisting of 20 percent dirt. Should not Comrade Kudin make up at least a part of the loss he caused to the State?

The Belgorod Cement Plant also is in no hurry to deliver its product. Instead of 200 tons it has dispatched to the shock project a mere 60. The data of arrival of the remainder is unknown.

Apparently the Deputy Chairman of the All-Russian Sovnarkhoz Comrade Milovanov is in no hurry either. A month ago he demanded of the management of the combine the urgent submission within a 24-hour period of the order for the necessary machinery... and since then the fate of this order has remained unknown. This machinery happens to be urgently needed for the project! At least 40 dump trucks, eight cement wagons, four lumber wagons, and four semi-trailers for structural components are most immediately needed. At present it is simply impossible to operatively deploy the labor force on the site, due to the lack of transport. For the distance between the mines and the project objects is large. Had the enterprise at least five buses, the situation might improve considerably.

Previously, prior to the modernization, the heads of the combine had no special reason for anxiety. The production was going well, and the workers did not complain. The earnings were decent, and the housing adequate. The dining rooms at the mines provided sufficient meals. And in the evening there was place for leisure. All this changed once boys and girls with Komsomol cards began to arrive at the shock project site. There was no room to house them. At least two to three more dormitories were needed.

The director of the combine Comrade Morozov and his faithful assistant the Komsomol staff for the project did all they could. They had extra beds placed in the dormitories.



Comrade Morozov said: "At the Yegor'yevskiy Mine an administrative building was vacated and converted into a dormitory for 100 persons. Then another building, previously used to house a consumer services combine, was similarly converted. Now it is the turn of the lounges, the clubhouse, and these very premises..."

The director points to his own office and to the rooms housing the administration of the combine. He frowns, he understands that this is not the solution. But what should then be done?

"We shall somehow find rooms for them in Voskresensk," Comrade Morozov says worriedly.

The amenities available to the workers also are deficient.

Not so long ago a beautiful consumer services combine was built there. It was planned to open a barbershop, a laundry, a French-cleaning store, a tailor's store, and a shoe repair stores. But then the building had to be converted to a dormitory.

The youths assigned to this project by the Komsomol have correctly comprehended the tasks to develop chemical production in this country, imposed on the nation by the Party. The volunteers-enthusiasts are aware that they have not come here for fun and games, that initial difficulties cannot be avoided. But what if the difficulties chronically persist? What then was done by the heads of the Moscow Oblast Sovnarkhoz to provide normal living conditions for the workers? The answer: nothing.

All these knotty problems must be disentangled as soon as possible. Only then will the chemical workers of the Moscow Region be able to fulfill successfully their tasks to expand capacity.

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